Work Order ID 70478

Thursday, June 09, 2011 11:44:57 AM

Item ID: D2893-1 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: 2.75 Support

Start Date: 6/9/2011 **Start Qty:** 20.00 **Cust Item ID:**

Required Date: 6/30/2011 **Req'd Qty:** 20.00 **Customer:**

Reference:

Approvals: **Process Plan:** CL **Date:** 11/06/09 **Tooling:** _____ **Date:** _____ **Run Start** **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr / **Revision Nbr**: D2893 / Rev B									
100	HAAS CNC VERTICAL MACHINING #1	0.00							
HAAS 1	**Memo**	0.00							
HAAS CNC vertical machine #1	Machine as per Folio FA081□Tumble & Deburr								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
QC	**Memo**	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
QC	**Memo**	0.00							
Quality Control									

RQ 11.7.22 — 22

RQ 11.7.22 — 23

11.07.22 — 23

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector
		11-752 NCR#1 11-753 NCR#2					11.08.09

Part No: D2883-1 **PAR #:** N/A **Fault Category:** Scrap / Re-align **NCR:** Yes No **DQA:** [illegible] **Date:** 9 Nov 2011

Resolution: _____ **Disposition:** ~~[illegible]~~ **QA: N/C Closed:** _____ **Date:** 11/08/10

NCR: 70478

WORK ORDER NON-CONFORMANCE (NCR)

DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B: **Initial** Chief Eng	**Action Description** Chief Eng	**Sign & Date**	**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
11.7.27	100	Second operation machined too deep into the part. .150" +/- .010 is at .125. (X1) R.C.: NO NOTE TO WFORM MACHINIST.	11.07.28 GS1042	diameter offset entry in control. leave note for machin. sft in folio SCRAP PART	11.7.27	[illegible]	11.07.28	[illegible]
11.7.28	100	2.985" dimension is under tol. by .004" [2.981]". R.C.: most likely caused by tool wear (last two pieces x2)	11.07.28 GS1042	ACCEPTABLE DEVIATION. THIS W/O ONLY.	11.7.28	[illegible]	11.07.28	[illegible]

NOTE: Date & initial all entries

Work Order ID 70478

Thursday, June 09, 2011 11:44:58 AM

Item ID: D2893-1 **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: 2.75 Support

Start Date: 6/9/2011 **Start Qty:** 20.00 **Cust Item ID:**

Required Date: 6/30/2011 **Req'd Qty:** 20.00 **Customer:**

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powdercoat	**Memo**	0.00							
Powder Coating	Mask Inside Bore for Primming☐START TIME: _____☐OVEN TEMPERATURE: _____☐FINISH TIME: _____								
140	QC3- Inspect Part Finish	0.00							
QC	**Memo**	0.00							
Quality Control									
150	SprayPaint	0.00							
SprayPaint	**Memo**	0.00							
Spray Painting	Prime inside surface as per Dwg D2893 and QSI 005 4.3								

N/A per ECN 11-614

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 70478

Thursday, June 09, 2011 11:44:58 AM

Item ID: D2893-1 **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: 2.75 Support

Start Date: 6/9/2011 **Start Qty:** 20.00 **Cust Item ID:**

Required Date: 6/30/2011 **Req'd Qty:** 20.00 **Customer:**

Reference:

Run Start

Stop

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID / Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC14- Inspect Spray Paint	0.00							
QC	**Memo**	0.00							
Quality Control									
170	Identify as per dwg & Stock Location:	0.00							
Packaging	**Memo**	0.00							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

11-08-02

CK 11/08/02

11-08-Y

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

Thursday, June 09, 2011 11:44:53 AM

Work Order ID: 70478

Parent Item: D2893-1

Parent Item Name: 2.75 Support

Start Date: 6/9/2011 **Required Date:** 6/30/2011

Start Qty: 20.00 **Required Qty:** 20.00

Comments: IPP: C□02.11.26□Reformat; Added P/O□KJ
IPP D 06.04.19 removed alodine EC□
IPP Rev:E Added priming as per Rev B 07-04-30 JLM □
IPP F 08.03.19 Re-format EC verified by: DD
IPP Rev:G 08-05-15 add QC14 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
DSK078		Manufactured	No			100	Each	6.0000	0.5	10			

D2893-1 TURNING DETAIL

DR 11.7.22

Location	Loc Qty	Loc Code	
MAT060	6		
69591	6		5 (10 pcs)
70242	9		7 (14 pcs)

Dart Aerospace Ltd

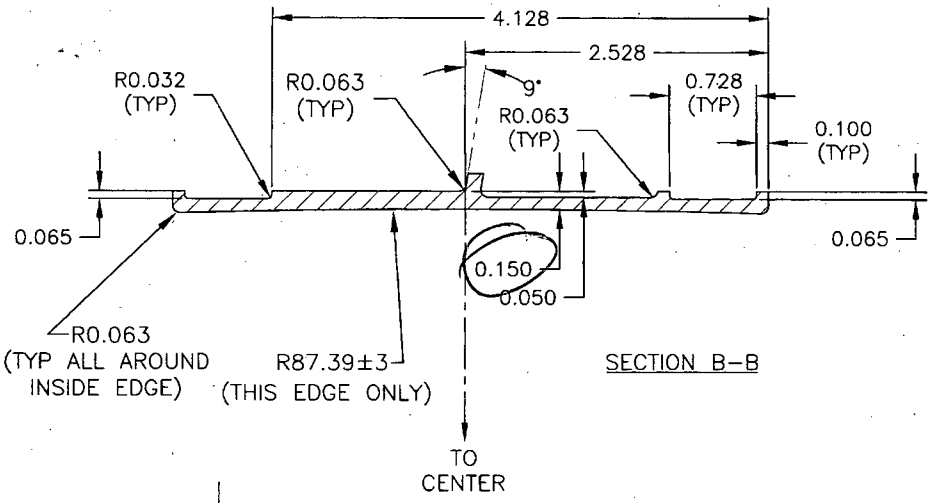
W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

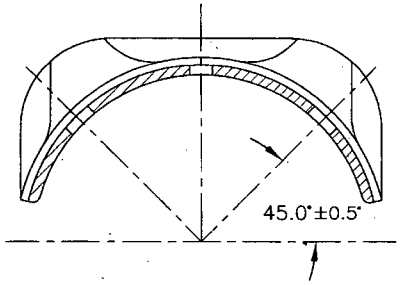
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

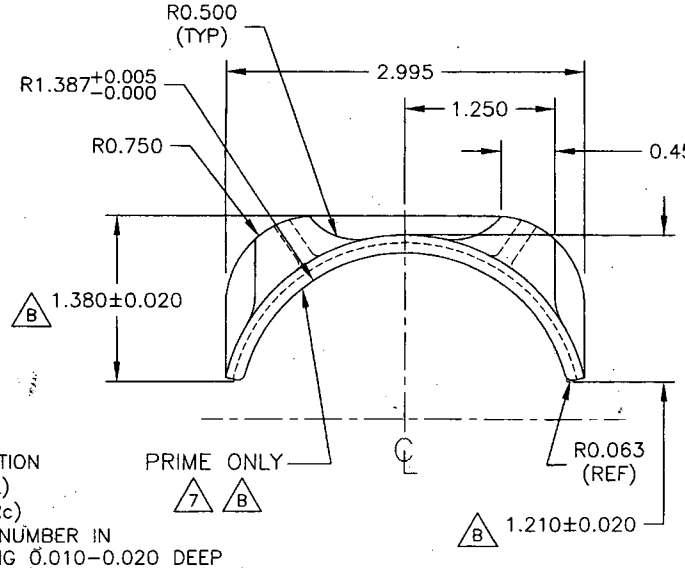
NOTE: Date & initial all entries

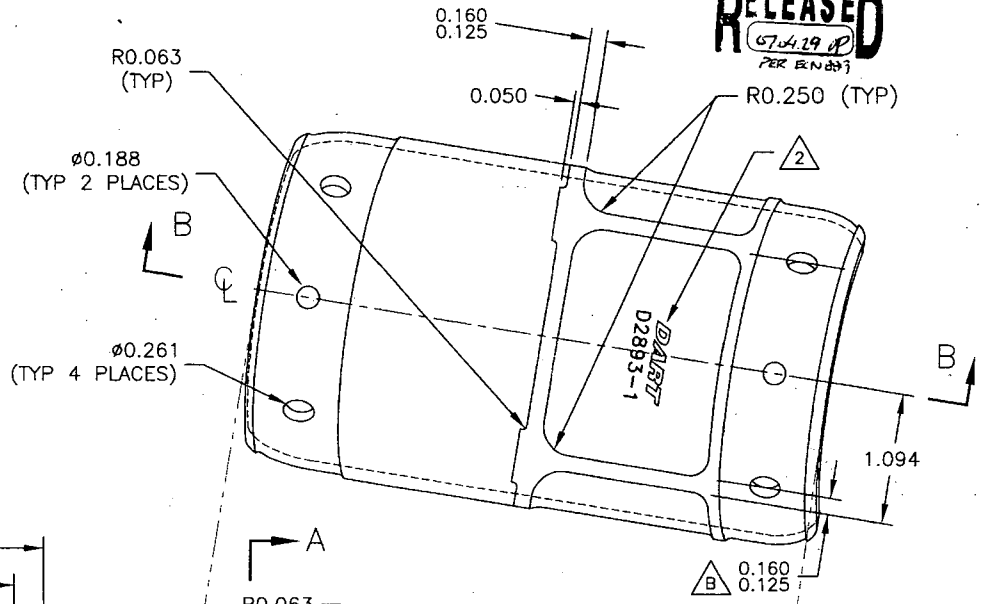


SECTION B–B



SECTION A–A
TOOLING HOLE DETAIL





RELEASED 07.04.29 QP PER ECN 887

C2011/06/09
WO#: 70478

D2893–1

1) MATERIAL: 17–4 PH STAINLESS STEEL
 HEAT TREAT TO H900 CONDITION
 (900°F FOR 1 HR, AIR COOL)
 MIN UTS = 170 KSI (38 HRc)
2) IDENTIFY WITH DART LOGO AND PART NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING 0.010–0.020 DEEP
3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
4) PART IS SYMMETRIC ABOUT CENTERLINE
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
6) ALL DIMENSIONS ARE IN INCHES
7) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
 PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2

B	07.03.16	UPDATE DIMS AS MFG., PRIME INSIDE
A	01.01.10	NEW ISSUE

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DESIGN QP	DRAWN BY PH	DART	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2893	REV. B SHEET 1 OF 1
DATE 07.03.16		TITLE ø2.750 SUPPORT	SCALE 1:1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	70478
Description: Ø2.750 Support		Part Number:	D2893-1
Inspection Dwg: D2893	Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

[X] First Article [] Prototype

				Record Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5	
HAAS Section									
AA	2.985	3.005		2.988	2.988	2.990	2.990	2.990	2.985
AB	0.440	0.460		.380	.450	.455	.455	.455	.455
AC	0.125	0.160		.155	.157	.157	.157	.157	.157
AD	0.040	0.060		.050	.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188	.188
AF	0.125	0.160		.144	.145	.144	.144	.144	.146
AG	0.140	0.160		.130	.145	.148	.148	.148	.148
AH	1.360	1.400		1.367	1.365	1.367	1.367	1.367	1.369
AI	0.040	0.060		.0555	.045	.052	.053	.053	.054
AJ	1.190	1.230		1.214	1.204	1.212	1.212	1.212	1.217
AK	0.010	0.020		.010	.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.526	2.528	2.528	2.528	2.538
AO	84.39	90.39		87.39	87.39	87.39	87.37	87.37	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063	.063
AR									
AS									
AT									
			Accept/Reject						

1.380
1.228

Measured by:	RF	Date:	11-7-28
Audited by:	11-07-29	Date:	
Prototype Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	70478
Description: Ø2.750 Support	Part Number:	D2893-1
Inspection Dwg: D2893 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

[X] First Article [] Prototype

				Record Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5	
HAAS Section									
AA	2.985	3.005		2.987	2.988	2.985	2.985	2.985	2.981
AB	0.440	0.460		.455	.455	.455	.455	.455	.455
AC	0.125	0.160		.160	.158	.154	.154	.154	.157
AD	0.040	0.060		.050	.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188	.188
AF	0.125	0.160		.144	.144	.146	.146	.146	.144
AG	0.140	0.160		.148	.148	.146	.146	.146	.146
AH	1.360	1.400		1.371	1.369	1.376	1.376	1.376	1.371
AI	0.040	0.060		.049	.050	.054	.050	.050	.055
AJ	1.190	1.230		1.214	1.212	1.223	1.212	1.212	1.219
AK	0.010	0.020		.010	.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063	.063
AR									
AS									
AT									
			Accept/Reject						

Measured by:	RP	Date:	11. 7. 26
Audited by:	11-07-29	Date:	
Prototype Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	

DART AEROSPACE LTD	Work Order:	70478
Description: Ø2.750 Support	Part Number:	D2893-1
Inspection Dwg: D2893 **Rev:** B		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

[X] First Article [] Prototype

				Record Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5	
HAAS Section									
AA	2.985	3.005		2.986	2.987	2.985	2.988	2.986	2.983
AB	0.440	0.460		.455	.455	.455	.455	.455	.455
AC	0.125	0.160		.156	.156	.156	.157	.156	.156
AD	0.040	0.060		.050	.050	.050	.050	.050	.050
AE	0.188	0.193		.189	.188	.188	.188	.188	.188
AF	0.125	0.160		.142	.145	.146	.147	.145	.144
AG	0.140	0.160		.146	.145	.146	.147	.146	.149
AH	1.360	1.400		1.371	1.371	1.375	1.372	1.372	1.371
AI	0.040	0.060		.053	.055	.055	.053	.054	.055
AJ	1.190	1.230		1.217	1.221	1.224	1.221	1.220	1.200
AK	0.010	0.020		.010	.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.260	.260	.260	.260	.260	.260
AQ	0.053	0.073		.063	.063	.063	.063	.063	.063
AR									
AS									
AT									
			Accept/Reject						

Measured by:	RG	**Date:**	11.7.24
Audited by:	11-07-24	**Date:**	
Prototype Approval:		**Date:**	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	

DART AEROSPACE LTD	Work Order:	70478
Description: Ø2.750 Support	Part Number:	D2893-1
Inspection Dwg: D2893 **Rev:** B		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

[X] First Article [] Prototype

				Record Actual Dimensions				
Dim	**Min**	**Max**	**Go/No Go Gauge**	**1**	**2**	**3**	**4**	**5**
HAAS Section								
AA	2.985	3.005		2.986	2.986	2.986	2.987	2.985
AB	0.440	0.460		.455	.455	.455	.455	.455
AC	0.125	0.160		.154	.155	.155	.155	.155
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188
AF	0.125	0.160		.142	.146	.144	.144	.146
AG	0.140	0.160		.147	.147	.150	.147	.150
AH	1.360	1.400		1.371	1.372	1.370	1.372	1.373
AI	0.040	0.060		.056	.053	.053	.054	.052
AJ	1.190	1.230		1.222	1.219	1.219	1.221	1.219
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.260	.260	.260	.260	.260
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.260	.260	.260	.260	.260
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
			Accept/Reject					

Measured by:		**Date:**	
Audited by:	11-07-19	**Date:**	
Prototype Approval:		**Date:**	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	